VI.—*Third List of Butterflies taken in Sikkim in October*, 1883, *with notes on habits, &c.*—*By* Lionel de Nicéville.

[Received November 6th; read November 7th, 1883.]

[With part of Plate X.]

In my two previous papers* on the Butterflies of Sikkim met with in the month of October, I enumerated 203 species. The present list adds 81 species more, making a total of 284 species actually seen or taken at different elevations in Sikkim in a single month in the year. This list is even now by no means exhausted, and goes to show how very rich the Rhopalocerous fauna of the hills and valleys near the Station of Darjiling is. Except where otherwise specified, all the numbered species given below were taken at low elevations (say between 1,000 and 2,000 feet above the sea); and it is to be remarked that my experience proves that almost without exception in the hills it is the bottoms of valleys through which streams run that are the richest in Butterflies, the extreme tops and ridges being the next most productive, while the sides and intermediate slopes produce hardly anything.

In "The Butterflies of India" it is stated by Major Marshall and myself (p. 87), that *Euplæa alcathoë* "appears to be not uncommon" in Sikkim. The Indian Museum, Calcutta, possesses a single specimen of this species from Sikkim collected by Schlagintweit, obtained from the late East India Company's Museum, but Mr. Otto Möller who has assiduously collected for three years near Darjiling and also in the Sikkim tarai, has not met with it, so if it does occur in Sikkim, it will probably only be found far in the interior in native territory. *Danais limniace* is not given in our book as occurring in Sikkim, but Mr. Otto Möller has met with some two or three specimens (one in the tarai, two in the Runjit valley), so it does occur there, but rarely, however, and is not wholly replaced (as stated in my last paper) by *D. septentrionis*.

Mr. Paul Möwis, who during the last summer purchased large numbers of the boxes of Sikkim butterflies collected by the Lepchas, most generously allowed me to select for the Museum what specimens I wanted, and amongst others I obtained single examples of *Hypolycæna nasaka*, Horsfield, and *Isoteinon masuriensis*, Moore, identical with North-West Himalayan specimens, except that the ground-colour of the underside of the former is darker; of *Hesperia acroleuca*, Wood-Mason and de Nicéville (= *H. hiraca*, Moore) identical with specimens from the South

* Journ. A. S. B., vol. l, pt. ii, pp. 49—60 (1881); and id., vol. li, pp. 54—66 (1882).

Andamans; and a male of the very rare *Iolaus maculatus*, Hewitson. As this sex has never been described, I append a description of the specimen.* In 1865 Mr. Hewitson when describing this species stated that "Two examples only have, I believe, hitherto arrived in Europe." Mr. Möwis also gave me a male of *Zophoessa atkinsonia*, Hewitson, taken on Senchal, 8,000 feet, in August; and a fine male of the beautiful *Argynnis gemmata*, Butler, out of several other species in his possession (*Aulocera padma*, Kollar; *Argynnis lathonia*, Linnæus; and *Papilio machaon*, var. *asiatica*, Ménétriés, &c.), which he had obtained from a native who collected them at high elevations in Sikkim and Thibet.

LEPIDOPTERA RHOPALOCERA.

Family NYMPHALIDÆ.

Subfamily Danainæ.

204. *Euplœa deione*, Westwood.

A single pair. It seems a rare species wherever it occurs.

Subfamily Satyrinæ.

205. *Lethe dyrta*, Felder.

Males only.

206. *Lethe dinarbas*, Hewitson.

A worn male of this species was taken by me on Senchal, at 7,000 feet.

207. *Zophoessa sura*, Doubleday, Hewitson.

I saw a single specimen on Senchal, but was unable to net it. Mr. Möller has taken it on the Birch Hill Road, Darjiling, at 7,000 feet elevation, in perfect condition in November.

208. *Melanitis duryodana*, Felder.

The *Ypthima nareda* of my former lists should be *Y. newara*, Moore, and *Zipaëtis* should be written *Zipœtes*.

Subfamily Morphinæ.

209. *Enispe euthymius*, Doubleday.

Mr. Otto Möller took two fine males in the Runjit valley, and the Lepchas also obtained both sexes. It has the habits of a *Discophora*,

* *Iolaus maculatus*, Hewitson. Male. Upperside, *forewing* black, with a bluish-white streak at the base of the first median interspace not reaching the margin, also a basal pale blue patch in the interno-median interspace still further removed from the margin. *Hindwing* below the subcostal nervure suffused throughout with pale blue. Underside as in the female. No secondary sexual characters. Expanse 1·6 inches.

It differs from the single female in the Indian Museum, Calcutta, from Sibsagar, Upper Assam *(S. E. Peal)*, in being smaller, the forewing less broad, the apex more pointed, the outer margin straighter, and the markings of the upperside, especially in the hindwing, much more blue.

flying off into the jungle when disturbed, and resting on a leaf with closed wings.

Subfamily NYMPHALINÆ.

210. *Cupha erymanthis*, Drury.

Mr. Otto Möller saw a single specimen of this and the following species in the bed of a stream below Pashok, but was unable to capture them.

211. *Atella sinha*, Kollar.

212. *Pyrameis cardui*, Linnæus.

A single specimen seen. It is by no means a common species in Sikkim, owing probably to the scarcity of its food-plant, the thistle.

213. *Junonia orithya*, Linnæus.

Common at about 4,000 feet elevation.

214. *Junonia almana*, Linnæus.

The *Junonia laomedia* of my former lists should now stand as *J. atlites*, Linnæus, the latter having lately been found to be the prior name given to this species.

215. *Herona marathus*, Doubleday, Hewitson.

A single male was taken by the Lepchas.

Euripus cinnamomeus, Wood-Mason. Up to date Mr. Möller and I have seen about thirty specimens of this species, all of which are *females*. Can it be that the female of *E. halitherses* is dimorphic? Certainly in Sikkim where the males of the latter species are common, *E. cinnamomeus* is more frequently met with than the acknowledged female of *E. halitherses* (*E. isa*).

Athyma zeroca, Moore.

FEMALE. Differs from female *A. selenophora*, Kollar, in having all the white bands and spots on the UPPERSIDE sordid instead of pure white, the *forewing* has the apex more rounded, and as predicted in my last Sikkim paper, the streak in the cell is undivided. The markings of the UNDERSIDE are very much as in the male. EXPANSE 2·8 inches.

Three specimens were obtained by the Lepchas.

216. *Euthalia telchinia*, Ménétriés.

A single female (= *aphidas*, Hewitson) was taken by the Lepchas, and is the first specimen of this sex I have seen.

217. *Euthalia phemius*, Doubleday, Hewitson.

Several females (= *sancara*, Moore) were taken.

Family LEMONIIDÆ.

Subfamily NEMEOBIINÆ.

218. *Dodona eugenes*, Bates.

219. *Dodona dipœa*, Hewitson.

Both sexes of this and the preceding species common on the Birch

Hill Road, Darjiling, at 7,000 feet elevation, in bright sunshine. They usually settle on the sand by the roadside with half open wings.

220. *Dodona adonira*, Hewitson.

I took a single male specimen of this beautiful and rare species at rest on filth with wide outspread wings on Senchal at 7,000 feet.

The species of the genus *Dodona* group themselves into two very distinct sections, those with and those without tails. In the first are *D. egeon*, *D. eugenes* and *D. longicaudata*; in the other are *D. dipœa*, *D. durga*, *D. adonira* (= *fatna*, Boisduval, *M. S.*, of Horsfield and Moore's Cat. Lep. E. I. Co., 1857, p. 243, n. 523), *D. ouida* and *D. deodata*.

221. *Abisara neophron*, Hewitson.

A single male at about 3,000 feet elevation was taken by me.

Family LYCÆNIDÆ.

222. *Pithecops zalmora*, Butler.

Two very distinct species of this genus occur together in the Great Runjit Valley.

Curetis bulis, Doubleday, Hewitson.

The female of this common Sikkim species was taken by the Lepchas, and together with three other specimens in Mr. Möller's collection are the first of this sex that I have seen. They differ from the male in having the cupreous colour of the upperside entirely replaced by pure white; they are also rather larger insects. Like *C. thetys*, Drury, this species is dimorphic in the female sex, Mr. Möller having a specimen which was obtained subsequently to the specimens described above, with the upperside of both wings bright ochreous instead of pure white.

223. *Cyaniris placida*, Moore, *M. S.*

224. *Cyaniris dilectus*, Moore.

225. *Cyaniris iynteana*, Moore, *M. S.*

226. *Cyaniris transpectus*, Moore.

227. *Cyaniris albocæruleus*, Moore.

Of the latter species and of *C. iynteana* I took but single specimens, all the other species of this genus enumerated above are very common, and occur at various elevations. The females of all are rare, and of some still unknown.

Niphanda ? cymbia, de Nicéville.

I took two males of this species at low elevations. They fly with great rapidity, but frequently settle on the tea bushes. It is a distinct species from the *N. tessellata* given in my last paper.

228. *Zizera pygmæa*, Snellen.

A single male.

229. *Miletus hamada*, Druce.

I took this species at low elevations, and the Lepchas obtained several specimens.

230. *Miletus boisduvali*, Moore.

Obtained by the Lepchas, and apparently not very rare. This and the preceeding species should certainly be separated generically.

231. *Castalius ananda*, de Nicéville.

A single male of this species was taken by me in the Great Runjit Valley, the Lepchas obtained both sexes.

232. *Castalius elna*, Hewitson.

Not uncommon at low elevations sucking up moisture.

233. *Nacaduba bhutea*, de Nicéville.

Males only.

234. *Horaga viola*, Moore.

I have hitherto seen five specimens only, all females, of this species from Sikkim, and one from the Kulu Valley (*A. Graham Young*). They all differ from Mr. Moore's description of *H. viola* in having the upperside uniform dark brown, not with the "lower basal and discal area of both wings dull cyaneous blue." In other respects they agree with the description.

235. *Horaga* species.

Male. Upperside black. *Forewing* with the discal white spot small and distinctly indented at the nervules, outwardly thrice, inwardly twice; below the median nervure basally cyaneous blue. *Hindwing* paler, the disc blue. A fine marginal pale blue line, not reaching the apex. Underside bright ochreous; *forewing* with the discal spot divided posteriorly by a brownish line, the spot not quite reaching the subcostal nervure. *Hindwing* with the discal band somewhat narrow, white, inwardly nearly straight and sharply defined with a dark brown line. The black spot on the anal lobe large; a large quadrate patch of irrorated black and white scales beyond, then another large black spot in the first median interspace, with a smaller linear one in the interspace beyond, all anteriorly defined with a pale metallic greenish line, also a line of the same colour in continuation of the discal white band, recurved to the abdominal margin. Female larger, wings broader, apex of *forewing* more rounded, discal spot larger. *Hindwing* with the blue colour paler and more restricted; four irrorated bluish spots between the nervules at the anal angle within the marginal pale blue line. Underside as in the male.

The species described above may be known from Sikkim specimens of *H. ciniata* by the ground-colour of the underside being bright ochreous and the discal spot not nearly reaching the costa; in this latter respect it agrees with Sikkim specimens of *H. viola*, but is otherwise abundantly distinct from that species. It is well figured by Hewitson (Ill. Diurn. Lep., *Lycænidæ*, pl. xiv, figs. 32, 33, 1863) under the name *Myrina onyx* (*Myrina syrinx* on the

plate ; the specimen figured being probably a male by reason of the pointed apex to the forewing). The *Myrina syrinx*, Felder, ♀, (Sitzb. Ak. Wiss. Wien, Math. Nat. Cl., vol. xl, p. 452, no. 14, 1860) from Amboyna is probably a distinct species.

A single pair was taken by the Lepchas.

The males of the genus *Horaga* may at once be distinguished from the females by an oval ochreous glandular patch of closely packed scales on the underside of the forewing placed on, and near the middle of, the submedian nervure.

236. *Iraota mæcenas*, Fabricius.

A single female.

237. *Nadisepa jarbas*, Fabricius.

238. *Deudorix epijarbas*, Moore.

A single male.

239. *Rapala orseis*, Hewitson.

A single male taken by the Lepchas is rather darker than typical specimens from the South Andamans.

240. *Rapala schistacea*, Moore.

241. *Loxura tripunctata*, Hewitson.

242. *Poritia hewitsoni*, Moore.

Both sexes of this very beautiful species.

243. *Sithon jangala*, Horsfield.

244. *Hypolycæna nasaka*, Horsfield.

A single female.

245. *Nilasera ? fulgida*, Hewitson.

I took one female at about 3,000 feet elevation.

246. *Nilasera ? abseus*, Hewitson.

Both sexes. This is a very common Sikkim species.

247. *Nilasera ? areste*, Hewitson.

One male only. It differs from the female on the upperside in having the outer margins only narrowly black, all the rest of the wings being a most vivid ultramarine blue. UNDERSIDE with the markings similar.

248. *Nilasera ? ariadna*, de Nicéville.

Both sexes. This is also a common species.

249. *Nilasera ? bazalus*, Hewitson.

A single female.

250. *Panchala ? paramuta*, de Nicéville.

Both sexes.

251. *Panchala ? perimuta*, Hewitson.

One male.

Family PAPILIONIDÆ.

Subfamily Pierinæ.

252. *Colias myrmidone*, Esper.

This species occurs in Darjiling as low as about 500 feet, and is not uncommon about the Station on grassy hill-sides. I have followed Mr. Elwes in thus naming the species allied to *C. edusa* which occurs in Sikkim, as stated in his paper on "Butterflies from Sikkim" (Proc. Zool. Soc. Lond., 1882, p. 401).

253. *Prioneris clemanthe*, Doubleday.

254. *Delias descombesi*, Boisduval.

Subfamily Papilioninæ.

255. *Papilio* (*Ornithoptera*) *rhadamanthus*, Boisduval.

A single male. It is far less common in Sikkim than *P. pompeus*.

256. *Papilio eriolcuca*, Oberthür.

This species is not uncommon in Sikkim. The female may be known from that sex of *P. astorion*, Westwood, by the ground-colour of the upperside being of a bronzy-greenish instead of an indigo-greenish; it never has a paler diffused patch near the inner angle of the forewing as occurs in many specimens of *P. astorion;* and the lateral pale bands on the body are of a much paler pink.

Females of this species stand as *P. aidoneus*, Doubleday, in Colonel Lang's collection, and it is possible that this identification is correct. The type specimen we are informed by Mr. Distant is not in the British Museum, and is probably lost.

257. *Papilio ganesa*, Doubleday.

Family HESPERIIDÆ.

258. *Choaspes gomata*, Moore.

259. *Choaspes vasutana*, Moore.

A single female.

260. *Astictopterus butleri*, Wood-Mason and de Nicéville. (Plate X, fig. 3, ♂).

This species will be more fully described hereafter, but the characters given below will suffice to distinguish it. Male. Upperside uniform dark fuliginous glossy brown. Underside slightly paler, the internal area up to the median nervure much paler. *Hindwing* with a brush of long hairs placed near the base of the costa, which when erected lie in a groove at the end of the cell of the forewing. Female larger, the wings broader and paler, and of course lacking the male tuft of hairs. Antennæ, *head*, *body* and *legs* concolourous with the wings.

Expanse: ♂, 1·5; ♀, 1·7 inches.

This species occurs in the Mergui Archipelago, also in Cachar, where the female has sometimes an obscure series of ferruginous spots on the upperside of the forewing across the disc, these spots are larger and paler on the underside. It is a much smaller species than *A. diocles*, Moore, and the forewing is much narrower.

261. *Matapa druna*, Moore.

A single female.

262. *Matapa sasivarna*, Moore.

Both sexes.

263. *Matapa shalgrama*, de Nicéville.

A female only.

264. *Parnara narooa*, Moore.

One male.

265. *Parnara tulsi*, de Nicéville.

A single male.

266. *Parnara cahira*, Moore.

267. *Parnara bada*, Moore.

268. *Suastus gremius*, Fabricius.

This is a rare Sikkim species, but it is very common in Calcutta and elsewhere. It rests with closed wings.

269. *Chapra mathias*, Fabricius.

270. *Chapra prominens*, Moore.

271. *Padraona ? purreea*, Moore.

I took a single female, it rests with closed wings. This species was first described from the South Andamans, I have received specimens besides from Orissa; Buxa, Bhutan ; and Chittagong. The male has a bare patch at the end of the cell on the upperside of the hindwing on which is placed an oval patch of closely packed scales.

Halpe sikkima, Moore.

This is the *?Halpe homolea* of my last list. Mr. Moore in his description of this species does not refer to *H. homolea*, so I am unable to say what are the differences between the two species. At low elevations near water this is the commonest Hesperid met with.

272. *Isoteinon satwa*, de Nicéville.

The males fly with immense rapidity, and continually fight with each other in the air. They always, however, return to the same "perch", an outer leaf of a bush, so are easily caught. They rest with closed wings.

273. *Cyclopides subvittatus*, Moore.

I took a single specimen.

274. *Hyarotis adrastus*, Cramer.

275. *Tagiades atticus*, Fabricius.

A single female. It rests with outspread wings. The only point of

difference I can detect between this species and *T. menaka*, Moore, is that the former has two spots in the cell of the forewing, the latter only one, Both occur in Sikkim, hitherto I have only received one or other species never both, from any one locality.

276. *Satarupa sambara*, Moore.

277. *Satarupa gopala*, Moore.

278. *Plesioneura restricta*, Moore.

279. *Plesioneura agni*, de Nicéville.

I took a single male. It rests with wide outspread wings.

Plesioneura leucocera, Kollar.

This is the *P. sumitra* of my last list.

280. *Plesioneura chamunda*, Moore.

281. *Coladenia indrani*, Moore.

282. *Coladenia dan*, Fabricius.

All the species of *Coladenia* known to me rest with outstretched wings.

283. *Antigonus angulata*, Felder.

Also rests with outspread wings, often on the bare ground.

284. *Hesperia ? swerga*, de Nicéville.

Behari Lall Doss &
Girish Chunder Chuckerbutty del.

INDIAN BUTTERFLIES.

West Newman & Co. chromo. lith.